



IsoSensitest Agar

Medium for antimicrobial susceptibility testing of clinical isolates by the disc diffusion technique, as standardized by the BSAC.

DESCRIPTION

IsoSensitest Agar is a medium recommended for antimicrobial susceptibility testing of clinical isolates by the disc diffusion technique (Kirby-Bauer method), as standardized by the British Society for Antimicrobial Chemotherapy (BSAC).

TYPICAL FORMULA (g/l)

Hydrolysed Casein	11.0	Menadione (Vitamin K3)	0.001
Peptones	3.0	Cyanocobalamine (Vitamin B12)	0.001
Glucose	2.0	L-Cystein	0.02
Sodium Chloride	3.0	L-Tryptophan	0.02
Starch	1.0	Pyridoxin (Vitamin B6)	0.003
Disodium Hydrogen Phosphate	2.0	Pantothenate	0.003
Sodium Acetate	1.0	Nicotinamide	0.003
Magnesium Glycerophosphate	0.2	Biotin	0.0003
Calcium Gluconate	0.1	Thiamine	0.0004
Cobaltous Sulphate	0.001	Adenine	0.01
Cupric Sulphate	0.001	Guanine	0.01
Zinc Sulphate	0.001	Xanthine	0.01
Ferrous Sulphate	0.001	Uracil	0.01
Manganous Chloride	0.002	Agar	8.0

Final pH 7.4 ± 0.2 at 25°C

METHOD PRINCIPLE

The medium allows the growth of the great majority of microorganisms without further supplementation and the ingredients have been carefully selected to yield sharp and reproducible inhibition zones.

The Kirby-Bauer method is based on the diffusion, through the agar, of the antimicrobial substance which soaks the paper disc. Each disc has a single concentration of the antimicrobial agent that inhibits the microorganism growth showing an halo around the disc. The diameter of the inhibiting halo is correlated with the Minimal Inhibitory Concentration (MIC).

PREPARATION

Dehydrated medium Suspend 31.4 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C. Aseptically dispense in Petri dishes.

Medium in bottles Melt the content of the bottle in a water bath at 100°C (loosing the cap partially removed) until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the bottle upside down. Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.

TEST PROCEDURE

1. Prepare a standardized suspension of the test organism using either the direct colony suspension or growth method.
2. Dip a sterile cotton swab into the adjusted suspension.
3. Inoculate the surface of the plate by streaking the swab over the entire agar surface.
4. Dispense antimicrobial discs onto the surface of the inoculated agar plate.
5. Incubate aerobically at 35±2°C for 18-20 hours.

INTERPRETING RESULTS

After incubation measure the diameter of the zone of complete inhibition including the diameter of the disc. Interpret the size of the zones of inhibition by referring to the current BSAC breakpoints and report the organism as susceptible, intermediate or resistant to the agents that have been tested.

APPEARANCE

Dehydrated medium: free-flowing, homogeneous, whitish.

Prepared medium: clear, whitish.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store tubes and bottles at room temperature away from light. Store prepared plates at 2-8°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

SHELF LIFE

Dehydrated medium: 4 years.

Medium in bottle: 2 years.

Ready-to-use plates: 6 months.

QUALITY CONTROL

Plates are inoculated with the microbial strains indicated in the QC table. Antibiotic discs are then promptly placed onto the agar surface.

Inoculum: 0.5 Mc Farland.

Incubation conditions: aerobically at 35±2°C for 18-20 h.

QC Table.

Microorganism	Specification	
<i>Staphylococcus aureus</i>	ATCC® 25923	Inhibition halo diameters as recommended by BSAC
<i>Escherichia coli</i>	ATCC® 25922	Inhibition halo diameters as recommended by BSAC
<i>Pseudomonas aeruginosa</i>	ATCC® 27853	Inhibition halo diameters as recommended by BSAC
<i>Enterococcus faecalis</i>	ATCC® 29212	Inhibition halo diameters as recommended by BSAC

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for *In vitro* diagnostic use and must be used only by properly trained operators.

DISPOSAL OF WASTE









Disposal of waste must be carried out according to national and local regulations in force.

BIBLIOGRAPHY

1. Bauer, Kirby, Sherris and Turck. 1966. Am. J. Clin. Pathol. 45:493.
2. Reller, Schoenknecht, Kenny and Sherris. 1974. J. Infect. Dis. 130:454.
3. BSAC. British Society for Antimicrobial Chemotherapy. Method for Antimicrobial Susceptibility Testing. Version 12; 2013.

PRESENTATION		Contents	Ref.
IsoSensitest Agar	Dehydrated medium	500 g of powder	611265
IsoSensitest Agar	Dehydrated medium	100 g of powder	621265
IsoSensitest Agar	90 mm ready-to-use plates	20 plates	10028
IsoSensitest Agar	90 mm ready-to-use plates	100 plates	10028*
IsoSensitest Agar	Bottles	6 x 200 ml bottles	413010

TABLE OF SYMBOLS

LOT Batch code	IVD <i>In vitro</i> Diagnostic Medical Device	 Manufacturer	 Use by	 Fragile, handle with care	 Keep away from sunlight
REF Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult Instruction For Use	 Do not reuse	



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